

CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in the application.

Please cancel claims 11-20, 27, 30, 33, and 36-48;

Please add new claims 49-70 as follows:

1-48. Cancelled

49. (New) An isolated *B. spectabilis* polynucleotide comprising SEQ ID NO: 8, wherein the polynucleotide encodes a polypeptide that has ribosome inactivation protein activity.

50. (New) A recombinant vector comprising the polynucleotide according to claim 49.

51. (New) The recombinant vector of claim 50, further comprising transcriptional and translational control sequences operably linked to the encoding polynucleotide.

52. (New) A host cell transfected with the recombinant vector of claim 50.

53. (New) A method for the recombinant expression of a ribosome-inactivating protein derived from *B. spectabilis* comprising SEQ ID NO: 8, said method comprising

(a) growing host cells comprising an expression vector encoding a ribosome inactivating protein comprising SEQ ID NO: 8;

- (b) inducing the host cells to express the ribosome-inactivating protein, and
- (c) isolating the expressed recombinant ribosome-inactivating protein.

54. (New) The method of claim 53, wherein said host cell is a bacterium, a plant cell, or a yeast.

55. (New) A method for producing a recombinant toxin-ligand conjugate, the method comprising:

- (a) growing host cells comprising an expression vector encoding a ribosome inactivating protein derived from *B. spectabilis* comprising SEQ ID NO: 8 operably linked with a nucleotide sequence encoding a ligand,
- (b) inducing the host cells to express the recombinant toxin-ligand conjugate, and
- (c) isolating the expressed recombinant toxin-ligand conjugate.

56. (New) The method of claim 55, wherein said host cell is a bacterium, a plant cell, or a yeast.

57. (New) The method of claim 55, wherein the ligand is a polypeptide or a peptide ligand.

58. (New) The method of claim 55, wherein the ligand is an immunoreactive ligand.

59. (New) The method of claim 55, wherein the ligand is an immunoglobulin, hormone, growth factor, or a peptide.

60. (New) An isolated *B. spectabilis* polynucleotide encoding a polypeptide comprising SEQ ID NO: 9, wherein the encoded polypeptide has ribosome inactivating protein activity.

61. (New) A recombinant vector comprising the polynucleotide according to claim 60.

62. (New) The recombinant vector of claim 61, further comprising transcriptional and translational control sequences operably linked to the encoding polynucleotide.

63. (New) A host cell transfected with the recombinant vector of claim 61.

64. (New) A method for the recombinant expression of a ribosome-inactivating protein derived from *B. spectabilis* comprising SEQ ID NO: 9, said method comprising

- (a) growing host cells comprising an expression vector encoding a ribosome inactivating protein comprising SEQ ID NO: 9;
- (b) inducing the host cells to express the ribosome-inactivating protein, and
- (c) isolating the expressed recombinant ribosome-inactivating protein.

65. (New) The method of claim 64, wherein said host cell is a bacterium, a plant cell, or a yeast.

66. (New) A method for producing a recombinant toxin-ligand conjugate, the method comprising:

- (a) growing host cells comprising an expression vector encoding a ribosome inactivating protein derived from *B. spectabilis* comprising SEQ ID NO: 9 operably linked with a nucleotide sequence encoding a ligand,
- (b) inducing the host cells to express the recombinant toxin-ligand conjugate, and
- (c) isolating the expressed recombinant toxin-ligand conjugate.

67. (New) The method of claim 66, wherein said host cell is a bacterium, a plant cell, or a yeast.

68. (New) The method of claim 66, wherein the ligand is a polypeptide or a peptide ligand.

69. (New) The method of claim 66, wherein the ligand is an immunoreactive ligand.

70. (New) The method of claim 66, wherein the ligand is an immunoglobulin, hormone, growth factor, or a peptide.